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| 09/826,188 | 04/04/2001 | Koji Ashizaki | 450100-03124 | 2843 |

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EXAMINER

CASIANO, ANGEL L

| ART UNIT | PAPER NUMBER |
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2182

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/826,188

Applicant(s)

ASHIZAKI ET AL.

Examiner

Angel L. Casiano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The present Office action is in response to Amendment dated 22 January 2004.
2. Claims 1-33 are pending in the application.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
4. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). Accordingly, priority date is set as 05 April 2000.

Drawings

5. Previous Objections to the Drawings have been overcome with the corrections filed in the present Amendment.

Specification

6. Previous Objections to the Specification have been overcome with the corrections filed in the present Amendment.

Claim Objections

7. Previous Objections to the Claims have been overcome with the corrections filed in the present Amendment.

Claim Rejections - 35 USC § 112

8. Previous Rejections under 35 U.S.C. 112 (second paragraph) have been overcome with the corrections filed in the present Amendment.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isoda [US 6,249,835 B1] in view of Yamaguchi et al. [US 6,094,276].

Regarding claim 1, Isoda teaches a data converter (see col. 1, lines 66-67; col. 2, lines 1, 8). The converter found in the cited prior art converts print data (see col. 2, lines 10-13) transmitted from a printing control unit to a printing unit via a serial bus (see col. 3, lines 48-50; Fig. 3). Isoda incorporates, as part of the disclosure, judging means (see “discrimination information”, col. 2, line 5) for detecting print data information included in a command (see Fig. 9). Isoda teaches print data information indicating and “judging” the type of print data transmitted from the control unit (see col. 4, lines 13-15, 28-32; col. 18, lines 52-56). Isoda teaches conversion control means (see col. 2, line 7; col. 9, lines 57-60). The data is converted into a type supported by the

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printing unit (see col. 4, lines 28-30; col. 5, lines 16-17; col. 6, lines 66-67; col. 7, lines 1-2; col. 8, lines 48-53) and outputted to the printing unit (see col. 4, line 31). Isoda however does not *explicitly* mention judging the “image type of the print data”, as part of the data converter disclosed. Yamaguchi et al. teaches a printing system (see Abstract). In addition, Yamaguchi et al. explicitly discloses *judging the image type* of the print data transmitted from a control unit (see Abstract). The print data, which is then supported by the print unit, is outputted. Accordingly, one of ordinary skill in the art would have been motivated to combine the cited disclosures, in order to prevent errors in the printing process. In particular, one of ordinary skill in the art would have been motivated to combine the disclosures *in order to avoid attempts by the user to print out image data of a type, which the printer cannot deliver* (see Yamaguchi et al., col. 1, lines 25-64).

As per claim 2, Isoda teaches a serial bus conforming to the IEEE 1394 standard (see Figs. 3, 6-8).

As per claim 3, the disclosure by Isoda teaches judging the type of page-description language of the print data (see “PDL”, col. 4, lines 14, 29; col. 5, lines 28-30). Isoda also converts the print data transmitted from the printing control unit to a type of page-description language supported by the printing unit (see col. 4, lines 28-31).

As for claim 4, the data converter found in the cited reference judges whether the print data transmitted from the print control unit is video data (see “image data”, col. 5, lines 29-30) or data described in a page-description language (see “PDL”, col. 5, line 28). Although Isoda teaches

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video and PDL data, it does not explicitly disclose outputting the video data as it is. It teaches instead, converting the print data in page-description language ("PDL") into a type supported by the printing unit (see col. 4, lines 28-31). It does teach transmitting image data to the printing unit (see col. 4, line 14; col. 9, lines 57-60). In addition, Isoda teaches the use of a serial bus capable of supporting real time data transmission of a large amount of vide and audio data (see col. 14, lines 1-13). Therefore, one of ordinary skill in the art would have been motivated to output the video data to the printing unit as it is, if the data would have been supported by the interface and printer type (see col. 4, lines 30-31).

Regarding claim 5, the combination of references teaches a *data converter* for converting print data transmitted from a printing control unit to a print unit via a serial bus (see Rejection for Claim 1). Therefore, the combination of prior art also teaches the *data converting method* directed to the data converter disclosed in claim 1. The present claim is therefore rejected under the same rationale.

As per claim 6, Isoda teaches a serial bus conforming to the IEEE 1394 standard (see Figs. 3, 6-8).

As per claim 7, the disclosure by Isoda teaches judging the type of page-description language of the print data (see "PDL", col. 4, lines 14, 29; col. 5, lines 28-30). Isoda also converts the print data transmitted from the printing control unit to a type of page-description language supported by the printing unit (see col. 4, lines 28-31).

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As per claim 8, the data converting method found in the cited reference judges whether the print data transmitted from the print control unit is video data (see “image data”, col. 5, lines 29-30) or data described in a page-description language (see “PDL”, col. 5, line 28). Although Isoda teaches video and PDL data, it does not explicitly disclose outputting the video data as it is. It teaches instead, the step of converting the print data in page-description language (“PDL”) into a type supported by the printing unit (see col. 4, lines 28-31). It also teaches transmitting image data to the printing unit (see col. 4, line 14; col. 9, lines 57-60). In addition, Isoda teaches the use of a serial bus capable of supporting real time data transmission of a large amount of video and audio data (see col. 14, lines 1-13). Therefore, one of ordinary skill in the art would have been motivated to output the video data to the printing unit as it is, if the data would have been supported by the interface and printer type (see col. 4, lines 30-31).

Regarding claim 9, the combination of references, as exposes in previous paragraphs, exposes a *data converter* for converting print data transmitted from a printing control unit to a print unit via a serial bus (see Rejection for Claim 1). Therefore, the cited combination also teaches the print unit (printer) directed to output the data converted in claim 1. The present claim is rejected under the same rationale.

As for claim 10, Isoda teaches a serial bus conforming to the IEEE 1394 standard (see Figs. 3, 6-8).

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As for claim 11, the disclosure by Isoda teaches judging means for the type of page-description language of the print data (see "PDL", col. 4, lines 14, 29; col. 5, lines 28-30).

As for claim 12, Isoda judges whether the print data transmitted from the print control unit is video data (see "image data", col. 5, lines 29-30) or data described in a page-description language (see "PDL", col. 5, line 28). Although Isoda teaches video and PDL data, it does not explicitly disclose outputting the video data as it is. It teaches instead, converting the print data in page-description language ("PDL") into a type supported by the printing unit (see col. 4, lines 28-31). It does teach transmitting image data to the printing unit (see col. 4, line 14; col. 9, lines 57-60). In addition, Isoda teaches the use of a serial bus capable of supporting real time data transmission of a large amount of vide and audio data (see col. 14, lines 1-13). Therefore, one of ordinary skill in the art would have been motivated to output the video data to the printing unit as it is, if the data would have been supported by the interface and printer type (see col. 4, lines 30-31).

Regarding claim 13, the combination of references teaches a *data converter* for *converting print data* transmitted from a printing control unit to a print unit via a serial bus (see Rejection for Claim 1). Therefore, the combination of prior art also teaches the *printing method* directed to *print the data converted* in claim 1. The present claim is rejected under the same rationale.

As per claim 14, Isoda teaches a serial bus conforming to the IEEE 1394 standard (see Figs. 3, 6-8).

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As per claim 15, the disclosure by Isoda teaches judging the type of page-description language of the print data (see “PDL”, col. 4, lines 14, 29; col. 5, lines 28-30). Isoda also converts the print data transmitted from the printing control unit to a type of page-description language supported by the printing unit (see col. 4, lines 28-31).

As for claim 16, the cited reference judges whether the print data transmitted from the print control unit is video data (see “image data”, col. 5, lines 29-30) or data described in a page-description language (see “PDL”, col. 5, line 28). Although Isoda teaches video and PDL data, it does not explicitly disclose outputting the video data as it is. It teaches instead, converting the print data in page-description language (“PDL”) into a type supported by the printing unit (see col. 4, lines 28-31). It does teach transmitting image data to the printing unit (see col. 4, line 14; col. 9, lines 57-60). In addition, Isoda teaches the use of a serial bus capable of supporting real time data transmission of a large amount of vide and audio data (see col. 14, lines 1-13). Therefore, one of ordinary skill in the art would have been motivated to output the video data to the printing unit as it is, if the data would have been supported by the interface and printer type (see col. 4, lines 30-31).

Regarding claim 17, the combination of prior art teaches a *data converter* for converting print data transmitted from a printing control unit to a print unit via a serial bus (see Rejection for Claim 1). Therefore, the cited combination also teaches the *printing control unit* directed to the data converter in claim 1. The present claim is rejected under the same rationale.

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As per claim 18, Isoda teaches a serial bus conforming to the IEEE 1394 standard (see Figs. 3, 6-8).

As for claim 19, the disclosure by Isoda teaches identifying the type of page-description language of the print data (see "PDL", col. 4, lines 14, 29; col. 5, lines 28-30). Isoda also identifies information corresponding to the manufacturer of the printing unit (inherent, see col. 8, line 50).

As per claim 20, the disclosure by Isoda teaches judging the type of page-description language of the print data (see "PDL", col. 4, lines 14, 29; col. 5, lines 28-30). Isoda also converts the print data transmitted from the printing control unit to a type of page-description language supported by the printing unit (see col. 4, lines 28-31).

As for claim 21, Isoda judges whether the print data transmitted from the print control unit to the printing unit is video data (see "image data", col. 5, lines 29-30) or data described in a page-description language (see "PDL", col. 5, line 28).

Regarding claim 22, the combination of prior art teaches a *data converter* for converting print data transmitted from a printing control unit to a print unit via a serial bus (see Rejection for Claim 1). Therefore, the combination of references also teaches the *printing controlling method* directed to the data converter in claim 1. The present claim is rejected under the same rationale.

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As per claim 23, Isoda teaches a serial bus conforming to the IEEE 1394 standard (see Figs. 3, 6-8).

As per claim 24, Isoda teaches identifying the type of page-description language of the print data (see "PDL", col. 4, lines 14, 29; col. 5, lines 28-30). Isoda also identifies information corresponding to the manufacturer of the printing unit (inherent, see col. 8, line 50).

As for claim 25, Isoda teaches judging the type of page-description language of the print data (see "PDL", col. 4, lines 14, 29; col. 5, lines 28-30). Isoda also converts the print data transmitted from the printing control unit to a type of page-description language supported by the printing unit (see col. 4, lines 28-31).

In consideration of claim 26, Isoda judges whether the print data transmitted from the print control unit to the printing unit is video data (see "image data", col. 5, lines 29-30) or data described in a page-description language (see "PDL", col. 5, line 28).

Regarding claim 27, Isoda teaches a printing system (see Abstract). The cited system includes a printing control unit (see col. 2, lines 10-13). The cited unit includes means for generating data to be printed by a printing unit connected via a serial bus (see col. 3, lines 48-50; Fig. 3). Isoda discloses input/output means for outputting a control command (inherent, see col. 18, lines 52-53; Fig. 1-6). Isoda teaches print data information indicating and "judging" the type of print data transmitted from the control unit (see col. 4, lines 13-15, 28-32; col. 18, lines 52-56). The cited

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system exposes means for making a printing work by use of the printing data supplied from the printing control unit via the input/output means (see Figs. 1-3). Isoda teaches conversion control means (see col. 2, line 7; col. 9, lines 57-60). The data is converted into a type supported by the printing means (see col. 4, lines 28-30; col. 5, lines 16-17; col. 6, lines 66-67; col. 7, lines 1-2; col. 8, lines 48-53) and outputted to the printing unit (see col. 4, line 31). Nonetheless, Isoda does not *explicitly* mention judging the “image type of the print data”, as part of the data converter disclosed. Yamaguchi et al. teaches a printing system (see Abstract). In addition, Yamaguchi et al. explicitly discloses *judging the image type* of the print data transmitted from a control unit (see Abstract). The print data, which is then supported by the print unit, is outputted. Accordingly, one of ordinary skill in the art would have been motivated to combine the cited disclosures, in order to prevent errors in the printing process. In particular, one of ordinary skill in the art would have been motivated to combine the disclosures *in order to avoid attempts by the user to print out image data of a type, which the printer cannot deliver* (see Yamaguchi et al., col. 1, lines 25-64)..

Regarding claim 28, this is oriented to a *printing method* in which data is transmitted via a serial bus from a printing control unit to a printing unit. The combination of prior art teaches a method for converting print data transmitted from a printing control unit to a print unit via a serial bus. Therefore, the cited combination also teaches the printing method directed to the data converter and printing system disclosed in previous claims. The present claim is rejected under the same rationale.

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Regarding claim 29, Isoda teaches a printing system (see Abstract). The system includes a printing control unit (see col. 2, lines 10-13). The cited unit includes means for generating data to be printed by a printing unit connected via a serial bus (see col. 3, lines 48-50; Fig. 3). Isoda discloses input/output means for outputting a control command (inherent, see col. 18, lines 52-53; Fig. 1-6). Isoda teaches print data information indicating and “judging” the type of print data transmitted from the control unit (see col. 4, lines 13-15, 28-32; col. 18, lines 52-56). The cited system exposes means for making a printing work by use of the printing data supplied from the printing control unit via the input/output means (see Figs. 1-3). Isoda teaches conversion control means (see col. 2, line 7; col. 9, lines 57-60). The data is converted into a type supported by the printing means (see col. 4, lines 28-30; col. 5, lines 16-17; col. 6, lines 66-67; col. 7, lines 1-2; col. 8, lines 48-53) and outputted to the printing unit (see col. 4, line 31). Isoda however does not *explicitly* mention judging the “image type of the print data”, as part of the data converter disclosed. Yamaguchi et al. teaches a printing system (see Abstract). In addition, Yamaguchi et al. explicitly discloses *judging* the *image type* of the print data transmitted from a control unit (see Abstract). The print data, which is then supported by the print unit, is outputted. Accordingly, one of ordinary skill in the art would have been motivated to combine the cited disclosures, in order to prevent errors in the printing process. In particular, one of ordinary skill in the art would have been motivated to combine the disclosures *in order to avoid attempts by the user to print out image data of a type, which the printer cannot deliver* (see Yamaguchi et al., col. 1, lines 25-64).

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Regarding claim 30, this is directed to a *printing method* in which data is transmitted via a serial bus from a printing control unit to a printing unit. Isoda in view of Yamaguchi et al. teaches a *method for converting print data* transmitted from a printing control unit to a print unit via a serial bus (see rejection for claim 1). Therefore, the combination of references also teaches the printing method directed to the data converter and printing system disclosed in previous claims. The present claim is rejected under the same rationale.

Regarding claim 31, Isoda teaches a printing system (see Abstract). The system includes a printing control unit (see col. 2, lines 10-13). The cited unit includes means for generating data to be printed by a printing unit connected via a serial bus (see col. 3, lines 48-50; Fig. 3). Isoda discloses input/output means for outputting a control command (inherent, see col. 18, lines 52-53; Fig. 1-6). Isoda teaches print data information indicating and “judging” the type of print data transmitted from the control unit (see col. 4, lines 13-15, 28-32; col. 18, lines 52-56). The cited system exposes means for making a printing work by use of the printing data supplied from the printing control unit via the input/output means (see Figs. 1-3). Isoda teaches conversion control means and a data converting block (see col. 2, line 7; col. 9, lines 57-60). The data is converted into a type supported by the printing means (see col. 4, lines 28-30; col. 5, lines 16-17; col. 6, lines 66-67; col. 7, lines 1-2; col. 8, lines 48-53) and outputted to the printing unit (see col. 4, line 31). Isoda however does not *explicitly* mention judging the “image type of the print data”, as part of the data converter disclosed. Yamaguchi et al. teaches a printing system (see Abstract). In addition, Yamaguchi et al. explicitly discloses *judging* the *image type* of the print data transmitted from a control unit (see Abstract). The print data, which is then supported by

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the print unit, is outputted. Accordingly, one of ordinary skill in the art would have been motivated to combine the cited disclosures, in order to prevent errors in the printing process. In particular, one of ordinary skill in the art would have been motivated to combine the disclosures *in order to avoid attempts by the user to print out image data of a type, which the printer cannot deliver* (see Yamaguchi et al., col. 1, lines 25-64).

Regarding claim 32, this is oriented to a *printing method* in which data is transmitted via a serial bus from a printing control unit to a printing unit. The combination of prior art teaches a method for converting print data transmitted from a printing control unit to a print unit via a serial bus. Therefore, the combination also teaches the *printing method* directed to the *data converter* and *printing system* disclosed in previous claims. The present claim is rejected under the same rationale.

Regarding claim 33, Isoda teaches a data transmitting method in which data is transmitted from a printing control unit via a serial bus (see Abstract; Figs 1-6). The cited method includes using a printing control unit (see col. 2, lines 10-13). The cited method teaches generating data to be printed by a printing unit connected via a serial bus (see col. 3, lines 48-50; Fig. 3). Isoda discloses input/output means for outputting a control command (inherent, see col. 18, lines 52-53; Fig. 1-6). Isoda teaches print data information indicating and “judging” the type of print data transmitted from the control unit (see col. 4, lines 13-15, 28-32; col. 18, lines 52-56) and if the data is supported by the printer (can or cannot be printed). The cited method includes the step of making a printing work by use of the printing data supplied from the printing control unit via the

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input/output means (see Figs. 1-3). Isoda teaches conversion control means (see col. 2, line 7; col. 9, lines 57-60). The original data is converted into a type supported by the printing means (see col. 4, lines 28-30; col. 5, lines 16-17; col. 6, lines 66-67; col. 7, lines 1-2; col. 8, lines 48-53) and outputted to the printing unit so it can be printed (see col. 4, line 31). Isoda however does not *explicitly* mention judging the “image type of the print data”, as part of the data converter disclosed. Yamaguchi et al. teaches a printing system (see Abstract). In addition, Yamaguchi et al. explicitly discloses *judging the image type* of the print data transmitted from a control unit (see Abstract). The print data, which is then supported by the print unit, is outputted. Accordingly, one of ordinary skill in the art would have been motivated to combine the cited disclosures, in order to prevent errors in the printing process. In particular, one of ordinary skill in the art would have been motivated to combine the disclosures *in order to avoid attempts by the user to print out image data of a type, which the printer cannot deliver* (see Yamaguchi et al., col. 1, lines 25-64).

Response to Arguments

11. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

12. In the remarks, applicants argued in substance that Isoda teaches determining a “rasterization level” (Page 21). Furthermore, applicants submit that “the rasterization level appears to be independent of the “image type”, and such, does not teach judging the *image type* of the print data”. Examiner agrees with applicants' appreciation that Isoda teaches determining a rasterization level. However, Examiner respectfully submits that this level is not independent

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of the “image type”. The Authoritative Dictionary of IEEE Standards Terms, 7th Edition teaches “raster graphics” as “the representation of an *image* by an array of pixels arranged in rows and columns” (Page 919, second column). It is obvious that “rasterization” refers to a preparation for display or printing and that the “rasterization level” would refer to the “level” of the “image data” to be “displayed” or “printed”. The Examiner, however does not rely on this argument for the rationale in the present Office action. The combination of references, as exposed herein, includes the limitations of the amended claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Hino [JP 09240080 A] teaches *printing control device* and printing control method.
- Fukuta [US 6,226,095 B1] teaches a *converter* that converts received image to image data of a *predetermined format*.
- Shimada [JP 09325867 A] teaches a method for converting *image data*.
- Chura [US 5,793,937] exposes a system, which has a unit converting description data to *image data*.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel L. Casiano whose telephone number is 703-305-8301. The examiner can normally be reached on 9:30-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

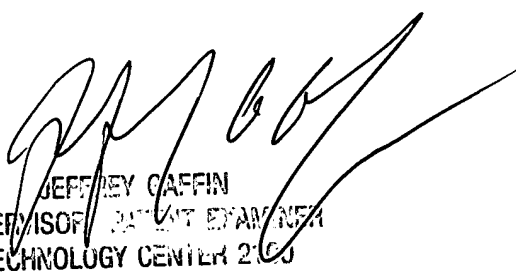
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29 March 2004.



JEFFREY CAFFIN
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 2100